Current Perspective of Laparoscopic Cholecystectomy for Acute Cholecystitis

Thesis

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List of Abbreviations

AC ..... Acute cholecystitis

ACC .....Acute calculus cholecystitis

CA .....Communicating Arcade

CBD .....Common bile duct

CD ..... Cystic duct

CHA .....Common hepatic artery

CHD .....Common hepatic duct

CT.....Computerized tomography

ELC .....Early Laparoscopic cholecystectomy

GB .....Gallbladder

GDA .....Gastroduodenal artery

HIDA.....Hydroxyiminodiacetic acid

LC .....Laparoscopic cholecystectomy

LHA ..... Left hepatic artery

LHD .....Left hepatic duct

MC.....Minilaparotomy cholecystectomy

MRCP.....Magnetic resonance cholangiopancreatography

MRI .....Magnetic resonance imaging

OC .....Open cholecystectomy

PD ..... Pancreatic duct

PSPDA .....Posterior superior pancreaticoduodenal artery

PTC .....Percutaneous Trans hepatic cholangiography

RASA .....Right anterior sectoral artery

RASD .....Right anterior sectoral duct

RECP.....Endoscopic retrograde cholangiopancreatography

RHA .....Right hepatic artery

RHD .....Right hepatic duct

RPSD ..... Right posterior sectoral duct

SILS.....Single incision laparoscopic surgery

SMV ..... Superior mesenteric vein

SSLC .....Single site laparoscopic cholecystectomy

SV ..... Splenic vein

US..... Ultrasonography

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Introduction

Acute cholecystitis is a potentially life-threatening condition, which affects >5 million Egyptian yearly and causes high economic burden around the world. Gallstones is the major contributor to acute cholecystitis **(Strasberg et al., 2008).**

Laparoscopic cholecystectomy (LC) is an important approach for treating acute cholecystitis nowadays. Issued data indicated that approximately 600,000 and >30,000 LCs were annually performed to treat acute cholecystitis in the Egypt. Although LCs have been extensively performed to manage acute cholecystitis, the optimal timing of LC for this given condition is inconclusive **(Ingraham et al., 2010).**

Traditionally, given the higher rate of morbidity such as bile duct injury, leakage, and conversion to open surgery, the delayed LC (DLC), which is defined as at least 1 week after initial conservative treatment, is commonly adopted in treating acute cholecystitis. However, several clinical studies supported early LC (ELC) (within 7 days of the onset of symptoms) to treat acute cholecystitis **(Gomi et al., 2013).**

Although some researchers investigated the optimal timing of LC for patients with acute cholecystitis previously, a consistent and conclusive conclusion has not yet been obtained from these researches. For instance, 2 researches qualitatively supported no difference between ELC and DLC in terms of mortality, 1 indicated no difference in both approaches for this outcome, and 2 considered this given outcome, but the effects of both approaches in causing mortality were identified. Moreover, 4 researches indicated that DLC shortens the duration of operation; however, 2 identified no difference between DLC and ELC in terms of this given outcome. Most importantly, these conflicting findings will confuse the informed decision making. And thus, we performed this thesis research of discordant meta-analyses to further assess the effects of ELC for acute cholecystitis compared with DLC **(Zhou et al., 2014).**

Aim of the Study

The aim of this study is To highlight the optimal time for laparoscopic cholecystectomy in acute cholecystitis , comparing early and delayed laparoscopic cholecystectomy in terms of duration of the surgery , difficulties , conversion to open surgery and complicatios.

Chapter (1)

Anatomy of the Biliary Tree and the Gall Bladder

Embryology of the Biliary Tract:

The biliary tree and liver develop from a diverticulum of the embryonic foregut at approximately 18 days of gestation. Between the fourth and fifth weeks, the diverticulum consists of a solid cranial portion and a hollow caudal portion. The solid cranial portion differentiates into the liver with the development of hepatocytes and intrahepatic bile ducts, while the hollow caudal portion gives rise to the gallbladder, the extrahepatic bile ducts, and the ventral pancreas ***(Schulick, 2011). (fig1)***

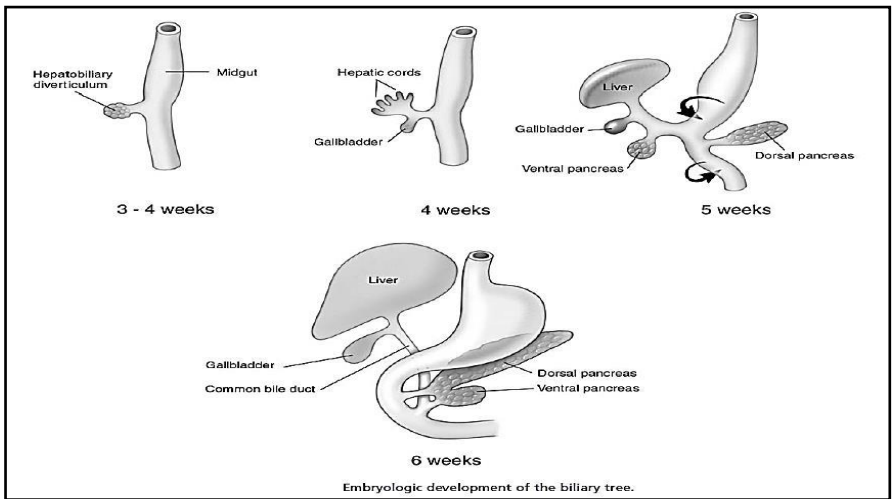

Figure (1): Embryologic development of biliary tree ***(Skandalakis et al., 2004)***